

AMENDMENTS TO THE CLAIMS

Please cancel claims 5, 7-9, 14, 16, 18 and 20, without prejudice, so that the claims read as follows:

1. (Previously Presented) A stereolithographic method for forming a stereolithographic three-dimensional object by sequentially repeating, until a predetermined stereolithographic three-dimensional object is formed, optical building processes of exposing a surface of a photocurable resin composition layer by way of a planar plotting mask to thus form an optically-cured resin layer having a predetermined cross-sectional profile pattern; applying a photocurable resin composition layer over the optically-cured resin layer; and exposing the surface of the photocurable resin composition layer to light by way of the planar plotting mask, to thus further form an optically-cured resin layer having a predetermined cross-sectional profile pattern, the method comprising:

using a planar plotting mask, which can continuously change a mask image, as the planar plotting mask;

performing a building operation of continuously moving the planar plotting mask over plotted areas on the surface of the photocurable resin composition layer such that overlaps are formed between adjacent ones of the plotted areas during at least one of the optical building processes and of exposing the surface of the photocurable resin composition layer to light by way of the planar plotting mask while continuously changing a mask image of the planar plotting mask in accordance with a cross-sectional profile pattern of an optically-cured resin layer to be formed and in synchronism with movement of the planar plotting mask, to thus form an optically-cured resin layer having a predetermined cross-sectional profile pattern; and

performing the optical building processes such that a computer is utilized to generate mask images to attenuate a visual noticeability of the overlaps between the adjacent plotted areas in the optically-cured resin layer in a finally-obtained stereolithographic three-dimensional object by making a total intensity of light radiated onto the overlaps between the adjacent plotted areas in the optically-cured resin layer equal or analogous to the intensity of light radiated onto areas other than the overlaps.

2. (Cancelled).

3. (Previously Presented) The stereolithographic method according to claim 1, wherein the planar plotting mask is a planar plotting mask in which a plurality of micro-optical shutters capable of blocking or allowing transmission of light into microdot areas are arranged in a planar manner; and

the surface of the photocurable resin composition is exposed to light while a mask image is continuously changed in accordance with a cross-sectional profile pattern to be formed by means of the plurality of micro-optical shutters during continuous movement of the planar plotting mask.

4. (Original) The stereolithographic method according to claim 3, wherein the planar plotting mask is a planar plotting mask where a liquid-crystal shutter or a digital micromirror shutter is arranged in a planar manner.

5-9. (Cancelled).

10. (Previously Presented) The stereolithographic method according to claim 1, wherein the attenuation of the visual noticeability of the overlaps between the adjacent plotted areas in the optically cured resin layer in a finally-obtained stereolithographic three-dimensional object results in the overlaps being unnoticeable to the human eye.

11. (Cancelled).

12. (Previously Presented) The stereolithographic method according to claim 1, further comprising making a shape of the overlaps between the adjacent plotted areas in the optically-cured resin layer curved, to attenuate a visual noticeability of the overlaps between the adjacent plotted areas in the optically-cured resin layer in a finally-obtained stereolithographic three-dimensional object.

13. (Previously Presented) The stereolithographic method according to claim 1, further comprising staggering positions of the overlaps between the adjacent plotted areas in the optically-cured resin layer in vertically-stacked optically-cured resin layers, to attenuate a visual

noticeability of the overlaps between the adjacent plotted areas in the optically-cured resin layer in a finally-obtained stereolithographic three-dimensional object.

14. (Cancelled).

15. (Previously Presented) A stereolithographic method for forming a stereolithographic three-dimensional object by sequentially repeating, until a predetermined stereolithographic three-dimensional object is formed, optical building processes of exposing a surface of a photocurable resin composition layer by way of a planar plotting mask to thus form an optically-cured resin layer having a predetermined cross-sectional profile pattern; applying a photocurable resin composition layer over the optically-cured resin layer; and exposing the surface of the photocurable resin composition layer to light by way of the planar plotting mask, to thus further form an optically-cured resin layer having a predetermined cross-sectional profile pattern, the method comprising:

using a planar plotting mask, which can continuously change a mask image, as the planar plotting mask;

performing a building operation of continuously moving the planar plotting mask over plotted areas on the surface of the photocurable resin composition layer such that overlaps are formed between adjacent ones of the plotted areas during at least one of the optical building processes and of exposing the surface of the photocurable resin composition layer to light by way of the planar plotting mask while continuously changing a mask image of the planar plotting mask in accordance with a cross-sectional profile pattern of an optically-cured resin layer to be formed and in synchronism with movement of the planar plotting mask, to thus form an optically-cured resin layer having a predetermined cross-sectional profile pattern; and

performing the optical building processes such that a computer is utilized to generate mask images to attenuate a visual noticeability of the overlaps between the adjacent plotted areas in the optically-cured resin layer in a finally-obtained stereolithographic three-dimensional object by making a shape of the overlaps between the adjacent plotted areas in the optically-cured resin layer curved, or by staggering positions of the overlaps between the adjacent plotted areas in the optically-cured resin layer in vertically-stacked optically-cured resin layers.

16. (Cancelled).

17. (Previously Presented) The stereolithographic method according to claim 15, wherein the shape of the overlaps between the adjacent plotted areas in the optically-cured resin layer is made curved.

18. (Cancelled).

19. (Previously Presented) The stereolithographic method according to claim 15, wherein the positions of the overlaps between the adjacent plotted areas in the optically-cured resin layer are staggered in vertically-stacked optically-cured resin layers.

20. (Cancelled).